IN THE SPECIFICATION

Please amend Paragraph [006] on page 4 of the original specification as follows:

[006] Performing an IPv6 forwarding table lookup at high-speed line rates (e.g., 10 Gbps) is a challenge because of the large address range (128-bit addresses). There currently is not a practical method for doing IPv6 lookups at line speed for high-speed interfaces (e.g., 10 Gbps routers). Current proposals use ternary content addressable memory (TCAM) ~~TCAM memory~~ devices to increase lookup speed, but doing the entire search in TCAM is not practical due to the expense and high power consumption of TCAM devices. Also, hashing and state of the art searching techniques are not adequate because it is necessary 1) to keep tables within a reasonable size limit for cost and performance considerations and 2) to keep the number of lookup stages low enough that memory access time does not prevent the lookup speeds from keeping up with line speeds.